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It will be seen that Mörch describes his species from a single valve, and in the course of his remarks upon its distinctive characters, he refers to the figures of *Chiloensis* in Philippi Abbild. The examination of a few specimens would have satisfied him of the entire identity of his shell with *Chiloensis*.

**Notes on American Fresh Water SHELLS, with descriptions of two new Species.**

BY GEO. W. TYRON, JR.

VIVIPARIDÆ, H. & A. Adams.

VIVIPARA, Montfort, 1810.

The following sub-genera of *Vivipara* inhabit the United States :

*TULOTOMA*, Haldeman. Shell heavy and nodulous, opercle corneous and concentric; animal with the habit of *Anculosa*.

Example. *V. magnifica*, Conrad.  
*V. bimonilifera*, Lea.

*MELANTHO*, Bowdich, 1822. Shell oval, solid, sub-umbilicate or entirely covered. Whorls smooth, aperture oval. Color uniform.

Examples. *V. ponderosa*, *decisa*, etc.

*HALDEMANIA*, Tryon, 1862. Shell subcarinate, operculum with a paucispiral nucleus, the accretions becoming concentric with age.

Example. *V. subcarinata*, Say.

There are several species of typical *Viviparæ* inhabiting our Western waters, all of which are entirely distinct from European species.

*V. lineata*, Valenc. (sp.)

*Paludina lineata*. Valenciennes. Rec. d'Obs. de Zool. par Humboldt et Bonpland, ii. p. 255, 1833.—Küster, Martini and Chemn. Conch. Cab. Monog. of *Paludina*, p. 10, 19, t. 2, f. 6—9; t. 4, f. 4. 1852.

" *vivipara*, Say, in Nicholson's Encyc. 3d. (American) Edit. t. 2, f. 5, 1819. Haldeman, Monog. p. 17, t. 6.

This shell differs from the *vivipara* of Europe in possessing four spiral red bands, whilst the latter has but three. An examination of hundreds of specimens from various portions of the Western States, and from Europe has convinced me that the difference is permanent.

*V. intertexta*, Say.

This shell has occasionally, distinct red revolving bands, four in number. I have a number of specimens from Davenport, Iowa, (Prof. Sheldon); and Mr. Binney has one from Rock River, Illinois; they differ from the New Orleans specimens in the umbilicus being more open.

*V. subpurpurea*, Say.

*V. Texana*, Tryon.



*T. solidâ, conicâ, pallide virente; spirâ elongatâ, suturâ valde impressâ, apice obtusâ; anfractibus senis, paulo-convexis, aperturâ suborbiculatâ, parvâ, 2—5 totius altitudinis æquante.*

Length  $1\frac{1}{8}$  inch, breadth  $\frac{3}{4}$  inch. First five whorls of the spire equal in length to the aperture.

*Hab.*—Texas.

Coll. Acad. Nat. Sci. Coll. G. W. Tryon, Jr.

Shell solid, narrowly conic, consisting of six whorls, which are somewhat flattened around their upper portion; sutures well impressed. Aperture suborbicular, equalling 2-5ths of the length

1862.]

of the shell. Umbilicus covered. Epidermis light green with faint red revolving bands.

This shell most resembles *V. subpurpurea*, but is easily distinguished by having six whorls, which are much narrower than in that species. The spire is almost double the length of that of *subpurpurea*, and the epidermis is lighter in color.

*V. subsolidata*, Anthony. Proc. Acad. Nat. Sci. p. 71, 1860.

Through the kindness of Prof. D. S. Sheldon, of Davenport, Iowa, I have received a number of specimens of this shell and of *V. integra*, Say, from the Mississippi River at that place. The latter reaches the size of *subsolidata*, which it much resembles, but it is easy to separate them by the following distinctive characters:

*V. subsolidata*.

Spire *longer* than the aperture, consisting of *seven* whorls, acuminate.

Body whorl *subangulated* near the middle, the angle being quite conspicuous in half-grown shells.

*V. integra*.

Spire *shorter* than the aperture, consisting of *six* or occasionally six and a half whorls. Body scarcely angulated, being almost regularly convex.

Shell much more ventricose than *subsolidata*.

*V. ponderosa*, Say.

May be readily distinguished from *V. integra* by its shorter spire, much more ventricose form, and by the body whorl being almost flat in the centre, so that its lateral sides for some distance are almost parallel. The shoulder of the whorls is also more prominent than in either of the other specimens.

#### *AMNICOLIDÆ*, Tryon, 1862.

AMNICOLA, Gould and Haldeman.

There are two very distinct groups of shells included by authors in this genus; in the first, which may be considered typical, the shells are globose, with a short spire of three or four whorls; the second I propose to separate as a subgenus, which may be thus characterized:

Subgenus POMATIOPSIS, Tryon, 1862.

Shell elongate, the spire (of about six whorls) much exceeding the length of the aperture.

Example. *A. lapidaria*, Say.

*A. depressa*, Tryon.

*T. orbiculatâ, subhyalinâ; anfractibus quarternis, convexis; ultimo magno, 5—6 totius longitudinis æquantè, angustè umbilicatâ. Aperturâ semi-circulari; labio interne appresso. Sutrâ impressâ. Long. 4 mill. Lat. 4 mill.*



(Figure magnified  $2\frac{1}{2}$  times.)

*Hab.*—Mississippi River at Davenport, Iowa. Prof. Sheldon. Coll. Acad. Nat. Sci., Smithsonian Inst., and of Prof. D. S. Sheldon, Isaac Lea, J. G. Anthony, and Geo. W. Tryon, Jr.

Shell subhyaline, rather solid, orbicular; spire depressed, consisting of nearly four whorls; apex acute, suture profoundly impressed. Body whorl very convex, equalling 5-6ths the total length of the shell, narrowly umbilicate. Aperture semi-circular, the inner lip being nearly straight.

The only shell which this resembles is *V. subglobosa*, Say, which is, however, double the size of *A. depressa*, with a rather more exerted spire, and more concave inner lip.

[Sept.